

Oracle Enterprise Manager 12c

IBM DB2 Database Plug-in

May 2015

Safe Harbor Statement

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Heterogeneous Datacenter Management

Oracle's Philosophy

- Productize our deep understanding of the Oracle stack to provide integrated management
- Provide generic Oracle solutions for managing non-Oracle technology
 - User Experience Management, Middleware Management, Business Transaction Management, Testing & Test Data Management , ...
- Incent and promote others to provide optimized management for non-Oracle technology
- Provide product extensibility wherever possible
(today's focus: Plug-Ins)



Enterprise Manager 12c Heterogeneous Management

Making The Complex Simple In Three Steps

1. Use or create **plug-ins** using Enterprise Ready Extensible Framework

2. Leverage **common functions** through plug-ins

- Performance & Availability Monitoring
- Configuration Management
- Compliance Management
- Job System
- Alerting & Notifications
- Custom UI
- Reporting

3. Manage **like any other target**



IBM DB2 Plug-in

Revamped for Better Performance Analysis and Monitoring



New features

- New Performance page
- Enabled more Metric Thresholds
- 3 Out-of-the-Box Monitoring templates
- Migrated Information Publisher Reports to Business Intelligence Publisher Reports and more!

Summary

Database: SAMPLE (Quiesce)
DB2 Inst Status: Stop
Up Since: Thu Apr 23 11:21:27 GMT-0400 2015
Version: 10.5
Host: NOD-DB105-WIN12

Applications

Application Name	Agent Total CPU Util...	Rows Read/Written	Static SQL Statemen...	Dynamic SQL State...	Failed SQL Stateme...	Rollback SQL State...
db2fw1	0	0/0	0	0	0	0
db2stmm	0	0/0	0	0	0	0
db2wimd	0	0/0	0	0	0	0
db2pcsd	0	0/0	0	0	0	0
db2taskd	0	6/0	0	0	0	0
db2lused	0	0/0	0	0	0	0

Cache Ratio (%)

Tablespace Utilization (%)

Database Health Indicators

Alert Type	Alert State	Timestamp	Additional Info
Database State	Normal	2015-04-24 12:48:11.327	
Fullness of Transaction Log	Normal	2015-04-24 12:43:11.102	The following are the related
Fullness of Log FS	Normal	2015-04-24 12:33:11.728	The following are the related
Auto Storage Utilization	Normal	2015-04-24 12:43:11.102	The short term growth rate at

Incidents and Problems

* Target: Local target and related targets * Category: All | 0 | 2 | 1 | 0 |

Summary	Target	Severity	Status	Escalation level	Type	Time Since Last Upd...
The Tablespace Utilization o	⊙	✖	New	-	Incident	2 days 10 hours
Package Cache Hit Ratio is C	⊙	✖	New	-	Incident	2 days 9 hours
Catalog Cache Hit Ratio is 7	⊙	⚠	New	-	Incident	0 days 6 hours

Job Activity

For jobs whose start date is within the last 7 days.

Suspended Executions	1
Problem Executions	0
Action Required Executions	0
Scheduled Executions	0
Running Executions	0

IBM DB2 Plug-in 12.1.0.4.0

Benefits

Apply Enterprise Manager management and monitoring to your IBM DB2 workloads.

- ✓ **Comprehensive Monitoring**
 - Availability, Performance Metrics
 - Alerts, Blackouts
 - Templates
 - Groups/ Systems

- ✓ **Configuration Analysis**
 - Detailed configuration collection
 - View/Save/Compare Configurations

- ✓ **Reporting**

IBM DB2 Plug-in

Features

- IBM DB2 as EM **Managed Target**
 - Comprehensive collection of **monitoring Metrics** (~ 390)
 - Buffer Statistics, Memory Statistics, Cache Statistics
 - Locks, Processes, Space Usage
 - Users and Roles
 - HADR Cluster performance and status
 - Out-of-box **thresholds** on key metrics
 - 19 Out of the box **Reports** summarize key configuration and performance data
- Comprehensive **configuration management**
 - Server Configuration, Database Settings, Registry and Security Settings
 - Ability to View, Search and Compare configurations
 - Ability to schedule **Jobs**
 - Ability to kill blocking DB2 Applications
 - Ability to Start/Stop IBM DB2 Instances
 - Quiesce and Unquiesce jobs for DB2 Databases
 - **Versions** supported:
 - IBM DB2 9.1, 9.5, 9.7, 10.1, and 10.5

New Intuitive UI Dashboards

- Revamped for Better Performance Analysis and Monitoring
- Exposes even more key performance indicators
- Adds additional performance page with advanced investigative capabilities

The dashboard displays various performance metrics for the target 'DB_nod-db105-win12-SAMPLE'. Key components include:

- Performance History:** Line graphs showing 'Current Connections', 'Catalog Cache Hit Ratio (%)', and 'Package Cache Hit Ratio (%)' over time.
- Storage and IO KPIs:** A bar chart for 'Database Space Utilization (%)' and a line graph for 'Average Lock Wait Time (ms)'.
- Summary:** Database status (SAMPLE), instance status (DB2 Inst Status), up time (Thu Apr 23 11:21:27 GMT-0400 2015), version (10.5), and host (NOD-DB105-WIN12).
- Applications:** Table listing application names, agent CPU utilization, rows read/written, and failed SQL statements.
- Tablespace Utilization (%):** Horizontal bar chart showing utilization for Sysauxspace, Userspace1, Ibmdb2samplem1, Ibmdb2samplel1, Systoolspace, Systooltemp1space, and Temp1space1.
- Database Health Indicators:** Table listing alert types, states, timestamps, and additional info.
- Incidents and Problems:** Table listing incidents such as 'The Tablespace Utilization is 0', 'Package Cache Hit Ratio is 0', and 'Catalog Cache Hit Ratio is 7'.
- Job Activity:** Summary of job executions (Suspended, Problem, Action Required, Scheduled, Running) for the last 7 days.

New IBM DB2 Focused Dashboard Views

- View Database server as well as individual database instance health and availability
- Stop and Start jobs for the database instance and Quiesce and Unquiesce jobs for the monitored Database
- Key health, performance, and availability views

Summary

Database ↑ SAMPLE Quiesce

DB2 Inst Status ↑ Stop

Up Since Thu Apr 23 11:21:27 GMT-0400 2015

Version 10.5

Host NOD-DB105-WIN12

Applications

Application Name	Agent Total CPU Util...	Rows Read/Written	Static SQL Statemen...	Dynamic SQL State...	Failed SQL Stateme...	Rollback SQL State...
db2fw1	0	0/0	0	0	0	0
db2stmm	0	0/0	0	0	0	0
db2wimd	0	0/0	0	0	0	0
db2pcsd	0	0/0	0	0	0	0
db2taskd	0	6/0	0	0	0	0
db2lused	0	0/0	0	0	0	0

Cache Ratio (%)

Apr 24, 10:00:00 pm Apr 25, 10:00:00 am

Tablespace Utilization (%)

Tablespace	Utilization (%)
Syscatspace	~95
Userspace1	~65
Ibmdb2samplxml	~35
Ibmdb2samplrel	~15
Systoolspace	~5
Systoolstmpspace	~5
Tempspace1	~5

Database Health Indicators

Alert Type	Alert State	Timestamp	Additional Info
Database State	Normal	2015-04-24 12:48:11.327	
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Fullness of Log FS	Normal	2015-04-24 12:33:11.728	The following are the related
Auto Storage Utilization	Normal	2015-04-24 12:43:11.102	The short term growth rate at

Incidents and Problems

* Target Local target and related targets * Category All | 0 | 2 | 1 | 0 |

Summary	Target	Severity	Status	Escalation level	Type	Time Since Last Upd...
The Tablespace Utilization o	🟡	🔴	New	-	Incident	2 days 10 hours
Package Cache Hit Ratio is C	🟡	🔴	New	-	Incident	2 days 9 hours
Catalog Cache Hit Ratio is 7	🟡	🟡	New	-	Incident	0 days 6 hours

Job Activity

For jobs whose start date is within the last 7 days.

Suspended Executions	1
Problem Executions	0
Action Required Executions	0
Scheduled Executions	0
Running Executions	0



Drill into DB2 Lock Wait and Query Statistics

- View SQL statistics by CPU time and Execution Count
- Break down of Lock Waits by Top Waits by Blocking Application, Top Waits by Blocked Application, Top Waits by Table, and All Waits

ORACLE Enterprise Manager Cloud Control 12c

Enterprise Targets Favorites History Search Target Name

DB_nod-db105-win12-SAMPLE IBM DB2

Page Refreshed Apr 25, 2015 9:24:50 PM PDT

Top SQL Statements

CPU Time Day Week Month

CPU Time (ms per Hour)	Query
1555	SELECT CAST(stmt_text as varchar(5000)), (TOTAL_EXEC_TIME * 1000000 + TOTAL_EXEC_TIME_MS)/1000 FROM SYSIBMADM.SNAPDYN_SQL
888	SELECT T2.db_name, T2.pool_data_l_reads, T2.pool_data_p_reads, T2.pool_index_l_reads, T2.pool_index_p_reads, T2.pool_async_data_reads, T2.pool_async_index_reads, T2.pool_f
0	SELECT app.AGENT_ID, min(app.APPL_NAME), COALESCE(sum(wait.LOCK_WAIT_ELAPSED_TIME), 0) FROM SYSIBMADM.APPLICATIONS app LEFT JOIN SYSIBMADM.MON_LOCKWAIT
0	SELECT tbl.CREATOR, tbl.NAME, COALESCE(sum(wait.LOCK_WAIT_ELAPSED_TIME), 0) FROM SYSIBM.SYSTABLES tbl LEFT JOIN SYSIBMADM.MON_LOCKWAITS wait ON tbl.CREATOR
0	SELECT app.AGENT_ID, min(app.APPL_NAME), COALESCE(sum(wait.LOCK_WAIT_ELAPSED_TIME), 0) FROM SYSIBMADM.APPLICATIONS app LEFT JOIN SYSIBMADM.MON_LOCKWAIT

Lock Waits

Top Waits by Blocking Application Kill Application

Application Holding Lock	Duration Waiting (s)
db2lused	0
db2pcsd	0
OEM Plug-in	0
db2stnm	0
db2fw0	0

Identify Top IBM DB2 SQL Activity

- Identify “Top” SQL queries
- View by CPU Time or Execution Count
- Limit to last Day, Week or Month

Top SQL Statements

CPU Time

Day
 Week
 Month

CPU Time

Execution Count

Top SQL Statements

CPU Time

Day
 Week
 Month


CPU Time (ms per Hour)	Query
1555	SELECT CAST(stmt_text as varchar(5000)), (TOTAL_EXEC_TIME * 1000000 + TOTAL_EXEC_TIME
888	SELECT T2.db_name, T2.pool_data_l_reads, T2.pool_data_p_reads, T2.pool_index_l_reads, T2.po
0	SELECT app.AGENT_ID, min(app.APPL_NAME), COALESCE(sum(wait.LOCK_WAIT_ELAPSED_TIME
0	SELECT tbl.CREATOR, tbl.NAME, COALESCE(sum(wait.LOCK_WAIT_ELAPSED_TIME), 0) FROM SYS
0	SELECT app.AGENT_ID, min(app.APPL_NAME), COALESCE(sum(wait.LOCK_WAIT_ELAPSED_TIME



Managing IBM DB2 Applications

- Identify “Top” DB2 lock waits by Blocking Application, Blocked Application, Table, and All Waits
- Kill troublesome blocking DB2 applications from within the UI

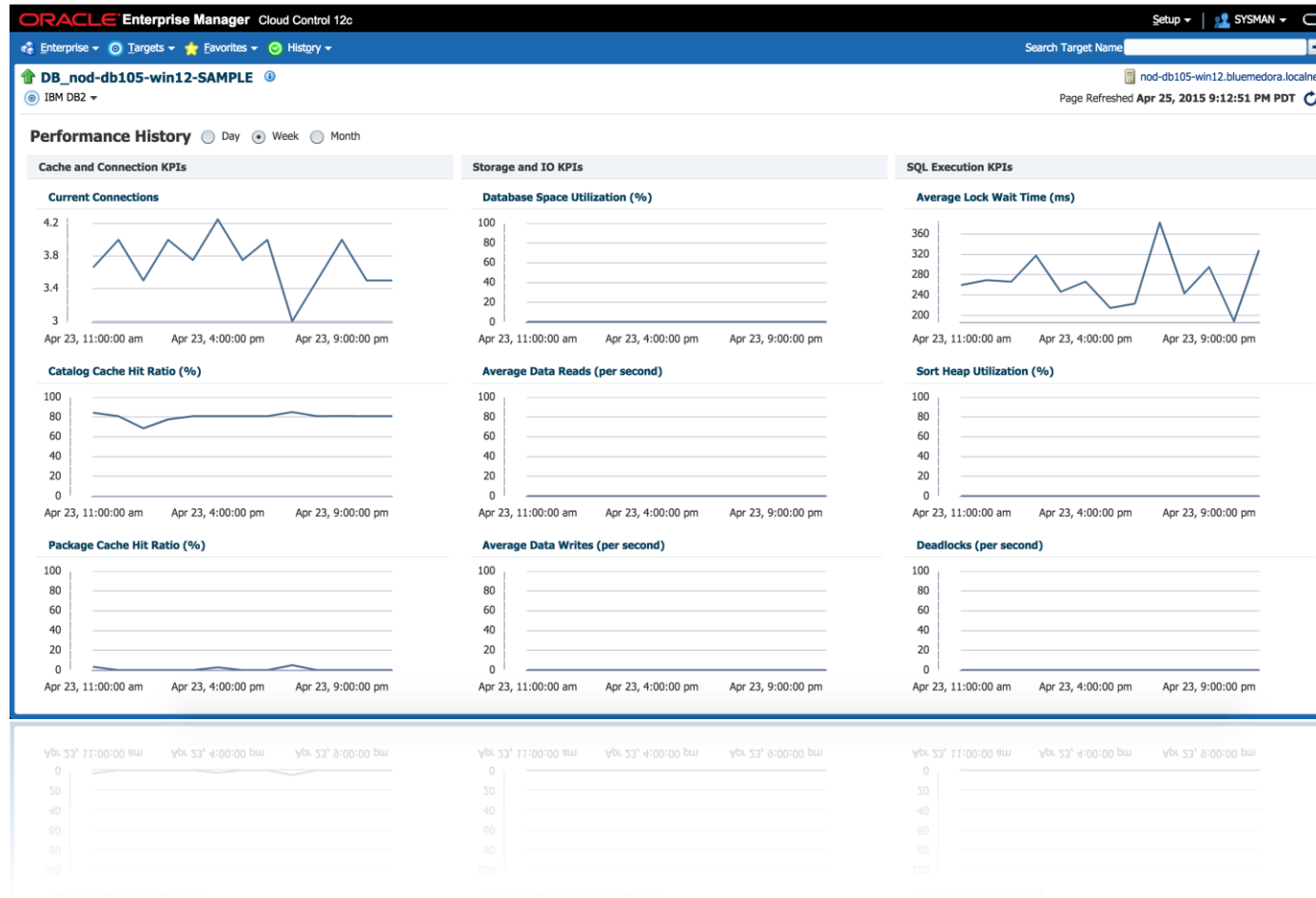
Lock Waits

All Waits 

[Kill Application](#)

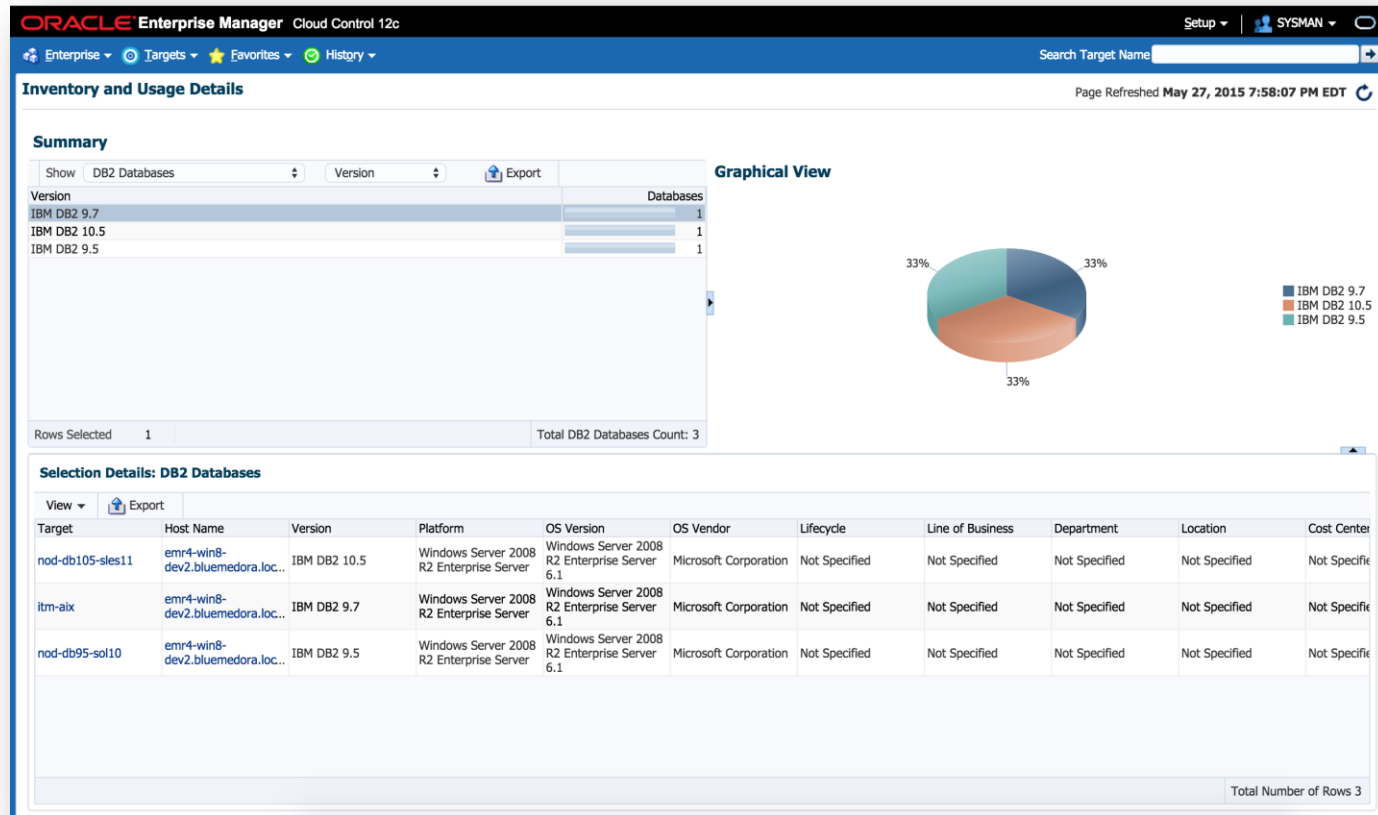
Lock Name	Lock Type	Schema	Locked Table	Duration Waiting (s)	Application Reque...	User Requesting ...	Application Holdin...	User Holding Lock
00020006000000000026	ROW	DB2INST1	EMPLOYEE	30.00	db2bp	DB2INST1	db2bp	DB2INST1

View Historical Key Performance Indicators



- Cache and Connection KPIs
- Storage and IO KPIs
- SQL Execution KPIs
- View the performance history by Day, Week, or Month

Inventory and Usage Details



- Drill down multiple levels of inventory details
- View different trends in inventory counts charted

Metrics

Hundreds of performance and configuration metrics available for incident thresholds, reports, analysis and comparison.

The screenshot displays the Oracle Enterprise Manager Cloud Control 12c interface. The top navigation bar includes 'Setup', 'SYSMAN', and a search field for 'Search Target Name'. The main content area is titled 'All Metrics' for target 'nod-db105-sles11'. A left-hand navigation pane lists various metric categories such as Agent Monitoring, Database Health, and Performance. The main area shows a table of 'Open Metric Events' with columns for Metric Name, Severity, Message, Last Collected Timestamp, and Open Since. Below this, a 'Top 5 alerting metrics (Last 7 days)' table is shown with columns for Metric Name, Critical Alert Count, and Warning Alert Count.

Metric Name	Severity	Message	Last Collected Timestamp	Open Since
Catalog Cache Hit Ratio (%) for SAMPLE	Warning	Catalog Cache Hit Ratio is 79.429% for the database SAMPLE. It has crossed the warning (80) or critical (70) threshold.	May 4, 2015 11:13:15 AM EDT	Less than 1 hour
Tablespace Utilization (%) for 0;SYSCATSPACE	Critical	The Tablespace Utilization of SYSCATSPACE is 99.072%. It has crossed the warning (80%) or critical (90%) threshold.	May 4, 2015 11:06:35 AM EDT	2 days and 17 hours
Package Cache Hit Ratio (%) for SAMPLE	Critical	Package Cache Hit Ratio is 20% for the database SAMPLE. It has crossed the warning (80) or critical (70) threshold.	May 4, 2015 11:13:15 AM EDT	2 days and 19 hours

Metric Name	Critical Alert Count	Warning Alert Count
Catalog Cache Hit Ratio (%) for SAMPLE	4	5
Tablespace Utilization (%) for 0;SYSCATSPACE	3	0
Package Cache Hit Ratio (%) for SAMPLE	2	0

Drill Down Into Individual IBM DB2 Statistics

- Drill into hundreds of IBM DB2 metrics
- View associated alerts for particular metrics
- Choose to view the metric in real-time or customized historical views

The screenshot displays the Oracle Enterprise Manager Cloud Control 12c interface for monitoring IBM DB2 metrics. The main content area is titled 'nod-db95-sol10 > All Metrics' and shows a table of 'Overflow Accesses'.

Data File Identifier	Table Name	Table Schema	Table Type	Page Reorganizations	Average Value	Low Value	High Value	Last Known Value	Current Severity
5	SYSTABLES	SYSIBM	CATALOG_TABLE	0	62	62	62	62	Not Applicable
5	HMON_ATM_INFO	SYSTOOLS	USER_TABLE	0	1,088	1,088	1,088	1,088	Not Applicable

Below the table, the 'Data File Identifier/Table Name/Table Schema/Table Type/Page Reorganizations' for the selected row is shown: 5/HMON_ATM_INFO/SYSTOOLS/USER_TABLE/0.

The 'Statistics' section displays the following values:

- Last Known Value: 1088
- Collection Timestamp: May 10, 2015 7:12:39 PM EDT
- Average Value: 1,088
- Low Value: 1,088
- High Value: 1,088

The 'Thresholds' section shows:

- Warning/Critical: Not Defined/Not Defined
- Comparison Operator: >
- Occurrences Before Alert: 3
- Corrective Actions: None

The 'Metric Value History' section features a line chart showing the metric value over time. The Y-axis ranges from 0 to 2,100, and the X-axis shows time from 09 PM on May 09, 2015, to 07 AM on May 10, 2015. The chart shows a constant value of 1,088. A legend on the right identifies the data series as 'Overflow Accesses: [5, HMON_ATM_INFO, SYSTOOLS, USER_TABLE, 0]'.

Comprehensive IBM DB2 Metric Thresholds

ORACLE Enterprise Manager Cloud Control 12c Setup | SYSMAN

Enterprise Targets Favorites History Search Target Name

IBM DB2 Demo emr4-ol6-demo.bluedora.localnet

IBM DB2 Database: IBM DB2 Demo > Metric and Collection Settings

Metric and Collection Settings

Cancel OK

Metrics Other Collected Items

View Metrics with thresholds

Expand All Collapse All

Metric	Comparison Operator	Warning Threshold	Critical Threshold	Corrective Actions	Collection Schedule	Edit
IBM DB2 Demo						
Cache Performance					Every 15 Minutes	
Catalog Cache Hit Ratio (%)	<	80	70	None		
Package Cache Hit Ratio (%)	<	80	70	None		
Container Health					Every 30 Minutes	
Container Rolled Up Alert State	=	Warning	Alarm	None		
Container Health Indicator					Every 30 Minutes	
Container Health Indicator Alert State	=	Warning	Alarm	None		
Database Health					Every 30 Minutes	
Database Rolled Up Alert State	=	Warning	Alarm	None		
Database Health Indicator					Every 30 Minutes	
Database Health Indicator Alert State	=	Warning	Alarm	None		
Database Manager Health					Every 30 Minutes	
DB Manager Rolled Up Alert State	=	Warning	Alarm	None		
Database Manager Health Indicator					Every 30 Minutes	
DB Manager Health Indicator Alert State	=	Warning	Alarm	None		
Database Monitoring					Every 15 Minutes	
Database Percentage of Applications Waiting on Locks (%)	>	50	70	None		

IBM DB2 Monitoring Templates

- Apply a subset of collection settings to multiple targets
- Standardize monitoring across your enterprise

ORACLE Enterprise Manager Cloud Control 12c

Setup | SYSMAN

Search Target Name

Page Refreshed Apr 26, 2015 12:18:13 AM EDT

Monitoring Templates

Monitoring Templates can be used to apply a subset of monitoring and collection settings to multiple targets. This allows you to standardize monitoring across your enterprise. When a Monitoring Template is applied to a target, any monitoring settings not specified in the Monitoring Template remain unaffected on the target.

Search

Name Target Type All

Display Oracle Certified Templates

Actions View Create Edit Delete... Apply... Compare Settings... View Past Apply Operations...

Name	Target Type	Owner	Pending	Failed	Aborted	Description
Basic IBM DB2 Monitoring Template	IBM DB2 Database	SYSMAN	0	0	0	Recommended basic template for monitoring IBM DB2.
IBM DB2 I/O Monitoring Template	IBM DB2 Database	SYSMAN	1	0	0	Recommended template for monitoring IBM DB2 I/O.
IBM DB2 Lock Monitoring Template	IBM DB2 Database	SYSMAN	1	0	0	Recommended template for monitoring locks and deadlocks in IBM DB2.

Columns Hidden 6

Total Rows: 3

Heterogeneous System Topology

Enterprise Manager helps you meet the challenges of managing the heterogeneous enterprise

- Comprehensive, top-down visibility into your infrastructure
- Rapid, accurate diagnosis & resolution of complex problems

The screenshot displays the Oracle Enterprise Manager Cloud Control 12c interface. The main area shows a Configuration Topology for a 'DIL Heterogeneous System'. The topology includes three nodes: 'Sybase_ASE_Database', 'IBM_DB2_Database', and 'PluginDemo-SQLServer-2012cluster'. The 'PluginDemo-SQLServer-2012cluster' node is selected, and its properties are shown in the right-hand panel. The properties panel includes a 'Filter' section with 'Node Types' set to 'Hosts' and a 'Properties' section with 'General' tab selected. The 'General' tab shows the following information:

Property	Value
Up Since	Mar 27, 2014 6:59:51 PM
Availability (%)	99.94
Agent	em-win8-sr4.bluededora.localnet:3872
Host	em-win8-sr4.bluededora.localnet
Member of	DIL Heterogeneous System

Incident Manager For IBM DB2 Plug-In

ORACLE Enterprise Manager Cloud Control 12c Setup | SYSMAN

Enterprise | Targets | Favorites | History Search Target Name

nod-db105-sles11 EMR4-WIN8-DEV1.bluededora.localnet

IBM DB2 Page Refreshed May 4, 2015 11:39:25 AM EDT

Incident Manager: All open incidents

Views Search

- Out-of-box
- My open incidents and problems
- Unassigned incidents
- Unacknowledged incidents
- Escalated incidents
- All open incidents
- Unassigned problems
- All open problems
- Events without incidents

Actions View View search criteria Critical ledge Clear ...

Severity	Summary	Target	Priority	Status	Last Updated	Owner
✖	Catalog Cache Hit Ratio is 23.404% for the database SAMPLE. It has crossed the warning (80) or critical (70) threshold.	nod-db105-sles11	None	New	May 1, 2015 6:23:11 PM EDT	-
✖	The Tablespace Utilization of SYSCATSPACE is 99.072%. It has crossed the warning (80%) or critical (90%) threshold.	nod-db105-sles11	None	New	May 1, 2015 5:52:52 PM EDT	-
✖	Package Cache Hit Ratio is 50% for the database SAMPLE. It has crossed the warning (80) or critical (70) threshold.	nod-db105-sles11	None	New	May 1, 2015 4:26:52 PM EDT	-

Rows Selected 1 Columns Hidden 22 Row count

✖ Package Cache Hit Ratio is 50% for the database SAMPLE. It has crossed the warning (80) or critical (70) threshold.

Unassigned, Not acknowledged

General Events Notifications My Oracle Support Knowledge All Updates Related Events Related Metrics

Incident Details

ID 1266

Metric package_cache_hit_ratio

Metric Group Cache

db_name SAMPLE

Target nod-db105-sles11 (IBM DB2 Database)

Incident Created May 1, 2015 4:26:21 PM EDT

Last Updated May 1, 2015 4:26:52 PM EDT

Summary Package Cache Hit Ratio is 50% for the database SAMPLE. It has crossed the warning (80) or critical (70) threshold.

Internal Event Name Cache:package_cache_hit_ratio

Event Type Metric Alert

Category Load

Tracking Acknowledge Add Comment ... Manage ... More

Escalated No Owner -

Priority None Acknowledged No

Status New Ticket ID d752da090f7b710051ff059ce1050e99

Last (Ticket d752da090f7b710051ff059ce1050e99 was created successfully on the external system through Comment connector ServiceNow Connector.) SYSMAN on May 1, 2015 4:26:52 PM EDT

This incident will be automatically cleared when the underlying issue is resolved.

Guided Resolution

Diagnostics

- Problem Analysis
- View topology
- View recent configuration changes
- View Metric Help

Actions

- Reevaluate Alert
- Edit Thresholds

Metric Extensions

Missing a metric your team depends on?

Do you want to integrate custom scripts?

Use Oracle Enterprise Manager's Metric Extension capabilities to easily expand and customize the IBM DB2 solution with a convenient UI-based development workflow.

The screenshot shows the Oracle Enterprise Manager Cloud Control 12c interface for configuring a new Metric Extension. The page is titled "Metric Extensions" and is in the "General Properties" step of a 6-step process. The "Create New: General Properties" section includes a progress bar and navigation buttons (Back, Next, Finish, Cancel). The main configuration area is divided into two sections: "General Properties" and "Collection Schedule".

General Properties

- * Target Type: IBM DB2 Database
- * Name ME\$: DB2_New_Metric
A Metric Extension Name can only contain alpha-numeric characters and the following non leading special characters : ('_' , '-' , ' ' , ' ')
- * Display Name: My New DB2 Metric
- * Adapter: OS Command - Multiple Columns
 Tokenizes OS command output using user-specified delimiter
- Description: [Empty text box]

Collection Schedule

- Data Collection: Disabled Enabled
- Use of Metric Data: Alerting Only Alerting and Historical Trending
- Upload Interval: 1 Collections
- Frequency**
- Collection Frequency: By Minutes
- Repeat Every: 15 Minutes

Latest Configuration of IBM DB2

- DB2 version and fix pack level
- Platform and OS details
- Relevant DB2 registry settings
- DB Manager Configuration details

The screenshot displays the Oracle Enterprise Manager Cloud Control 12c interface. The top navigation bar includes 'Enterprise', 'Targets', 'Favorites', and 'History'. The main content area is titled 'nod-db105-sles11' and shows the 'DB2 Instance' configuration. A search bar is present with the text 'Instance Name'. Below the search bar, the 'Configuration Properties' section shows a table with the following data:

Instance Name	Number of DB Partitions	Bit Size of Current Instance	Release Number	Service Level	Build Level	Program Temporary Fix	Fix Pack Number
db2inst1	1	64	0604010E	DB2 v10.5.0.3	s140203	IP23551	3

The interface also shows a 'Latest Configuration' section with a 'Refresh' button and a 'Configuration Report' button. The left sidebar contains a tree view with the following items: 'nod-db105-sles11', 'DB2 System', 'DB2 Product', 'DB2 Partitions', 'DB2 Instance', 'Registry Settings', 'DB Manager Configuration : Capacity', 'DB Manager Configuration : Logging and R', 'DB Manager Configuration : Connection', 'DB Manager Configuration : Partitioned Data', and 'DB Manager Configuration : Database Instance'.

Compare IBM DB2 Configurations

ORACLE Enterprise Manager Cloud Control 12c Setup | SYSMAN

Enterprise Targets Favorites History Search Target Name

Compare Result

Page Refreshed **May 10, 2015 8:21:22 PM EDT**

Result for job CONFIGURATION COMPARISON JOB SUN MAY 10 2015 20:20:52 EDT

Comparison Job Activity >

Comparison Details

Template No Template

First Configuration **nod-db105-sles11 (IBM DB2 Database)**
Collected May 9, 2015 8:25:33 PM (Latest Configuration)

Second Configuration **nod-db95-sol10 (IBM DB2 Database)**
Collected May 10, 2015 10:39:20 AM (Latest Configuration)

Compare Save Mode Save Only Differences

Job Details

Show Differences Only [Export All Differences](#)

Target Properties

- DB2 System**
- DB2 Product
- DB2 Partitions
- DB2 Instance
- Registry Settings
- DB Manager Configuration : Capac
- DB Manager Configuration : Partit
- DB Manager Configuration : Data

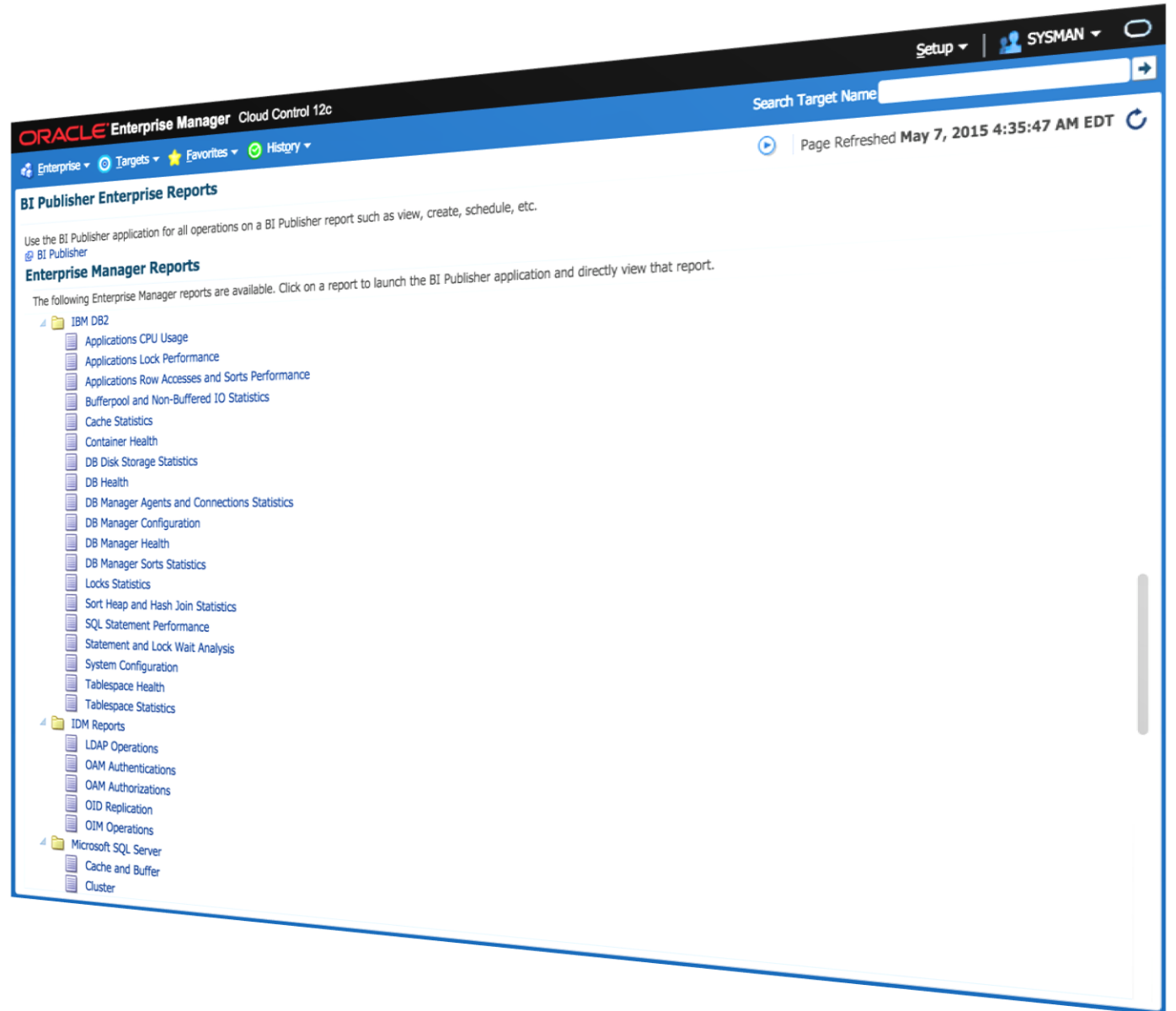
Result	Configuration Property Name	First	Second
⚠	OS Type	Linux	SunOS
⚠	Product	2	Generic_147148-26
⚠	Version	6	5.10
⚠	Total Memory (MB)	5910	4096

Reports

Comprehensive out-of-the-box reports

Includes 19 IBM DB2 reports including reports focused on:

- Performance Monitoring
- Configuration
- Storage



Reports

Performance

- In-depth performance reports
- View the SQL query statements consuming the most resources or taking the longest to execute

The screenshot displays the Oracle BI Publisher Enterprise interface. At the top, there is a navigation bar with the Oracle logo, 'BI Publisher Enterprise', a search bar, and links for 'Administration', 'Help', and 'Sign Out'. Below this is a secondary navigation bar with 'Home', 'Catalog', 'New', 'Open', and 'Signed In As sysman'. The main content area is titled 'Applications Lock Performance' and includes a 'Target Name' dropdown set to 'nod-db105-sles11' and an 'Apply' button. The report title is 'Applications Lock Performance' with a subtitle 'This page shows the data related to IBM DB2 Database Applications Lock Performance.' Below the subtitle is the section header 'Top 10 Applications Based on Average Lock Wait Time (ms)'. A table follows, listing 10 applications with columns for Agent Id, SQL Statement, Application Name, Average Lock Wait Time (ms), Locks Held, and Lock Timeouts.

Agent Id	SQL Statement	Application Name	Average Lock Wait Time (ms)	Locks Held	Lock Timeouts
5683		db2fw1	0	0	0
5684		db2fw0	0	0	0
5687		db2lused	0	0	0
5705		db2pcsd	0	0	0
5697		db2wimd	0	0	0
5699		db2stmm	0	0	0
5703		OEM Plug-in	0	2	0
5692		db2taskd	0	0	0

Reports Configuration

- In-depth configuration reports
- Reports for database and system configuration
- At-a-glance comparison of key database configuration values

ORACLE BI Publisher Enterprise

Search All

Home Catalog New

DB Manager Configuration

Target Name: nod-db105-sles11 Apply

DB Manager Configuration

This page shows the data related to IBM DB2 Database DB Manager Configuration.

DB Manager Capacity		DB Manager Database Instance	
ASL Heap Size (4KB):	15	Error Capture Level:	3
Monitor Heap Size (4KB):	90	Data Directory Path:	/home/db2inst1/sqllib/db2dump/
Audit Buffer Size (4KB):	0	Notify Level:	All Important information(no immediate action required)
Java Heap Size (4KB):	2048	System Monitor Switches:	80
Max Files Open:	-1	Comm. Bandwidth (Mbps):	1
Agent Priority:	100	Max No. of DB:	32
Max Agents:	0	Sys Admin Group Name:	DB2IADM1
Max Concurrent Agents:	0	CPU Speed (MIPS):	.001
Agent Pool Size:			
Initial Agent Pool Size:			

ORACLE BI Publisher Enterprise

Search All

Home Catalog New Open

System Configuration

Target Name: nod-db105-sles11 Apply

System Configuration

This page shows the data related to IBM DB2 Database System and Registry Settings Configuration.

System Configuration		Product Overview		
Server Name:	nod-db105-sles11	Database Path	Product Name	Version
OS Type:	Linux	/home/db2inst1/db2inst1/NODE0000/SQL00001/MEMBER0000/	AESE	10.5
OS Version:	2	/home/db2inst1/db2inst1/NODE0000/SQL00001/MEMBER0000/	AWSE	10.5
OS Release:	6	/home/db2inst1/db2inst1/NODE0000/SQL00001/MEMBER0000/	ESE	10.5
Total CPUs:	2	/home/db2inst1/db2inst1/NODE0000/SQL00001/MEMBER0000/	WSE	10.5
Configured CPUs:	2			
Total Memory (MB):	5910			

Instance Name	Number of Partitions	Bit Size	Release Number	Service Level	Build Level	Temporary Fix	Fix Pack
db2inst1	1	64	0604010E	DB2 v10.5.0.3	s140203	IP23551	3

Name	Value	Is Aggregate	Aggregate Name	Level
DB2ADMINSERVER	dasusr1	False		Global
DB2AUTOSTART	YES	False		Instance
DB2COMM	TCPIP	False		Instance
DB2INSTDEF	db2inst1	False		Environment
DB2SYSTEM	nod-db105-sles11	False		Global

Partition Number	Host Name	Logical Port	Switch Name
0			0

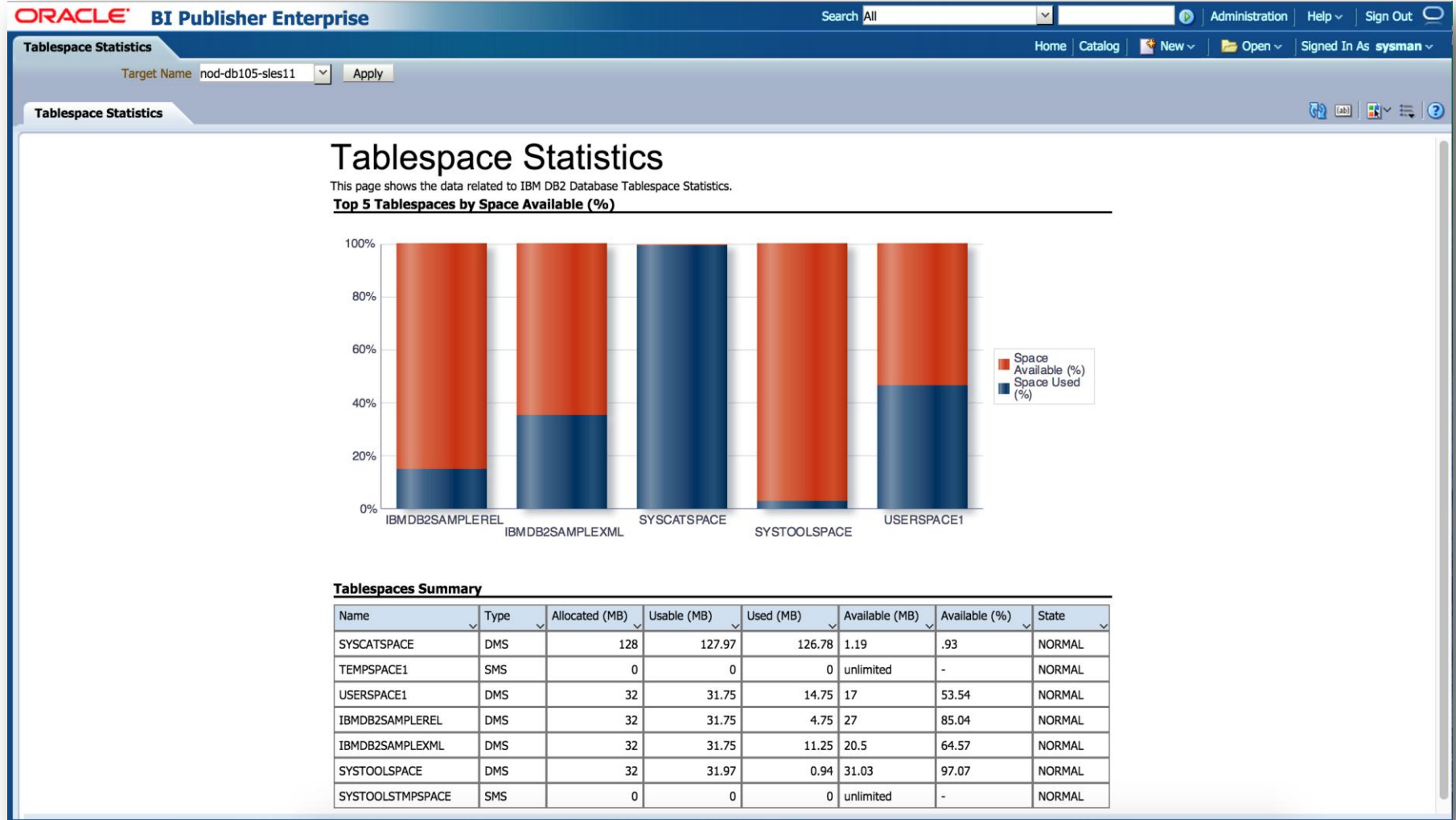
Manager Partitioned DB Environment

Connection Elapse Time (ms):	10
Number of FCM Buffers:	4096
Connection Retries:	5
Time Difference (mins):	60
Stop Timeout (mins):	10

Reports

Storage







- Schedule a report to identify databases storage utilization
- Identify file growth and location



Plug-ins: Where do you get them?

Self Update: Oracle Provided Content

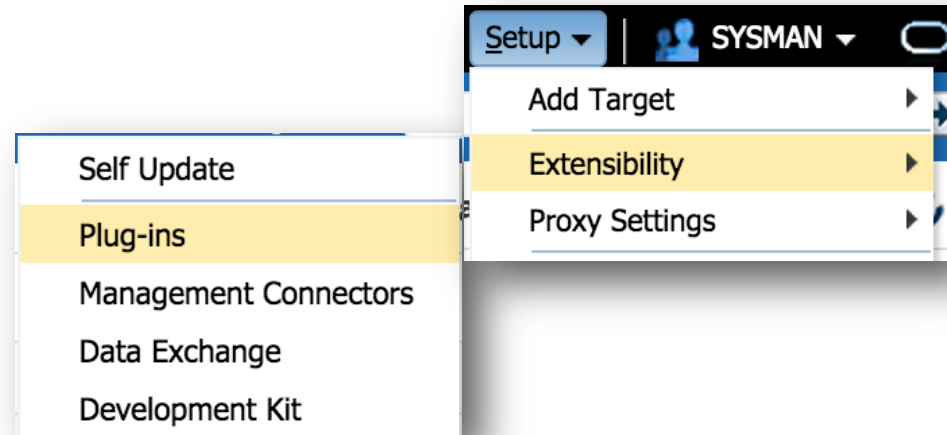
- Self Update
- Download the IBM DB2 plug-in directly from Self Update
- Delivers new features and updates
- Single console to search, download and manage target plug-ins
- Proactive notification for Oracle supplied updates if running in connected mode
- Supports Online & Offline modes
- Allows import of non-Oracle entities

Plug-in Updates					
Actions	Download	Apply	Plug-in	Search Description	
Status	OS Platform	Plug-in Name	Re	Version	Vendor
 Applied	Generic Platform	Microsoft SQLServ...	0	12.1.0.6.0	ORACLE
 Available	Generic Platform	Oracle Secure Glo...	0	12.1.0.1.0	ORACLE
 Available	Generic Platform	MySQL Database	0	12.1.0.2.0	ORACLE
 Applied	Generic Platform	Sybase ASE Datab...	0	12.1.0.4.0	ORACLE
 Applied	Generic Platform	IBM DB2 Database	0	12.1.0.4.0	ORACLE
 Available	Generic Platform	Oracle Database A..	0	12.1.0.1.0	ORACLE

Plug-In Manager

Single window Solution for all (Un)Deployment

- Integrated with Self Update
- Plug-ins must be deployed to OMS before agents
- Download, Deploy and Upgrade Plug-Ins across OMS and agent
- Option to resume the plug-in deployment. It will start from failed step.



The screenshot shows the Oracle Enterprise Manager Plug-In Manager page. The page title is 'ORACLE Enterprise Manager Cloud Control 12c'. The page content shows a table of plug-ins with columns for Name, Version (Latest Available, Latest Downloaded, On Management Server), Management Agent with Plug-in, and Description. The 'IBM DB2 Database' plug-in is highlighted.

Name	Version			Management Agent with Plug-in	Description
	Latest Available	Latest Downloaded	On Management Server		
> Applications					
> Cloud					
> Databases					
IBM DB2 Database	12.1.0.4.0	12.1.0.4.0	12.1.0.4.0	2	Enterprise Manager for DB2. Plugin provides comprehensive monitoring of DB2 environments.
Microsoft SQLServer Database	12.1.0.6.0	12.1.0.6.0	12.1.0.6.0	1	Enterprise Manager for Microsoft SQL Server
MySQL Database	12.1.0.2.0			0	Enterprise Manager for MySQL Database
Oracle Database	12.1.0.7.0	12.1.0.6.0	12.1.0.6.0	2	Enterprise Manager for Oracle Database provides comprehensive management for Oracle Database and related targets such as Real Application Cluster, Automatic Storage Management (ASM) etc.
Oracle TimesTen In-Memory Database	12.1.0.3.0			0	Enterprise Manager for Oracle TimesTen In-Memory Database
Sybase ASE Database	12.1.0.4.0	12.1.0.4.0	12.1.0.4.0	2	Enterprise Manager for Sybase ASE. Plugin provides comprehensive monitoring Sybase ASE Environments.
> Engineered Systems					
> Middleware					
> Servers, Storage and Network					

For More Information...

- The IBM DB2 Plug-in is listed in the **Oracle Technology Global Price List** under: **System Monitoring Plug-in for Non Oracle Databases**
- The **Oracle Global Price List** can be found at: <http://www.oracle.com/us/corporate/pricing/technology-price-list-070617.pdf>
- Latest IBM DB2 Plug-in documentation for installation, troubleshooting and monitoring metric reference: http://docs.oracle.com/cd/E24628_01/install.121/e25215/toc.htm